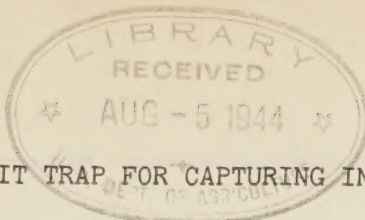


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



March 1935

A NEW TYPE OF BAIT TRAP FOR CAPTURING INSECTS

By H. H. Walkden, Division of Cereal and Forage Insects,
Bureau of Entomology and Plant Quarantine,
U. S. Department of Agriculture

In the course of the writer's cutworm investigations it was necessary to have a source of living adults for use in oviposition and life-cycle studies. The bait trap herein described has proved very satisfactory as a source of Noctuidae. Inasmuch as other Lepidoptera, Diptera, etc., are also taken, it is hoped that this type of trap, or a modification, may be of value to other workers interested in trapping insects.

Description of the Trap

The trap, as shown in the illustrations (figs. 1 and 2), consists of a frame supporting a screen cone and a chamber to confine the insects in semi-darkness until removed. The frame is of white pine, 30 inches high and 15 inches square. The chamber for retaining the catch is made of 28-gage galvanized iron and has a hinged lid. Figure 2 shows the trap with the lid lifted. The screened opening in the center of the lid is 6 inches square and may be hinged to facilitate removal of the insects. This opening is essential, since the insects would not enter the trap if it had a solid lid. In one corner is soldered a $\frac{3}{8}$ -inch tube, 2 inches long. By plugging the 1-inch opening in the top of the cone and covering the screened opening, the catch can be stupefied or killed, as desired, by introducing through the tube a small quantity of ether or carbon disulphide.

The following material is required for the construction of the trap:

- 4 pieces lumber, 2 by 2 by 30 inches, for legs
- 8 pieces lumber, 1 by 2 by 15 inches, for cross braces of frame
- 8 pieces lumber, 1 by 1 by 15 inches, for frame and lid of chamber
- 4 dozen flat-head screws, size 10, $1\frac{1}{2}$ inches
- 1 dozen flat-head screws, size 6, $\frac{3}{4}$ inch
- 1 piece window screen, 30 inches wide by 6 feet long, for cone
- 1 piece fine-mesh wire gauze, 7 by 7 inches, for opening in lid
- Galvanized iron, 28-gage, sufficient to make a box $11\frac{1}{2}$ inches wide, 15 inches long, and 6 inches deep
- 1 piece copper tubing, $\frac{3}{8}$ by 2 inches
- Solder for making cone and box

Operation of Trap

The trap is set on the ground and staked to prevent high winds from upsetting it. A shallow saucer filled with the bait is placed on the ground beneath the center of the cone. The insects attracted to the bait flutter upward through the cone into the chamber, from which they can be removed at the convenience of the operator. Several baits, such as fermenting fruit, or a 10-percent solution of molasses or sorghum in water, have been used with nearly equal success. In hot weather it is necessary to replenish the bait almost daily.

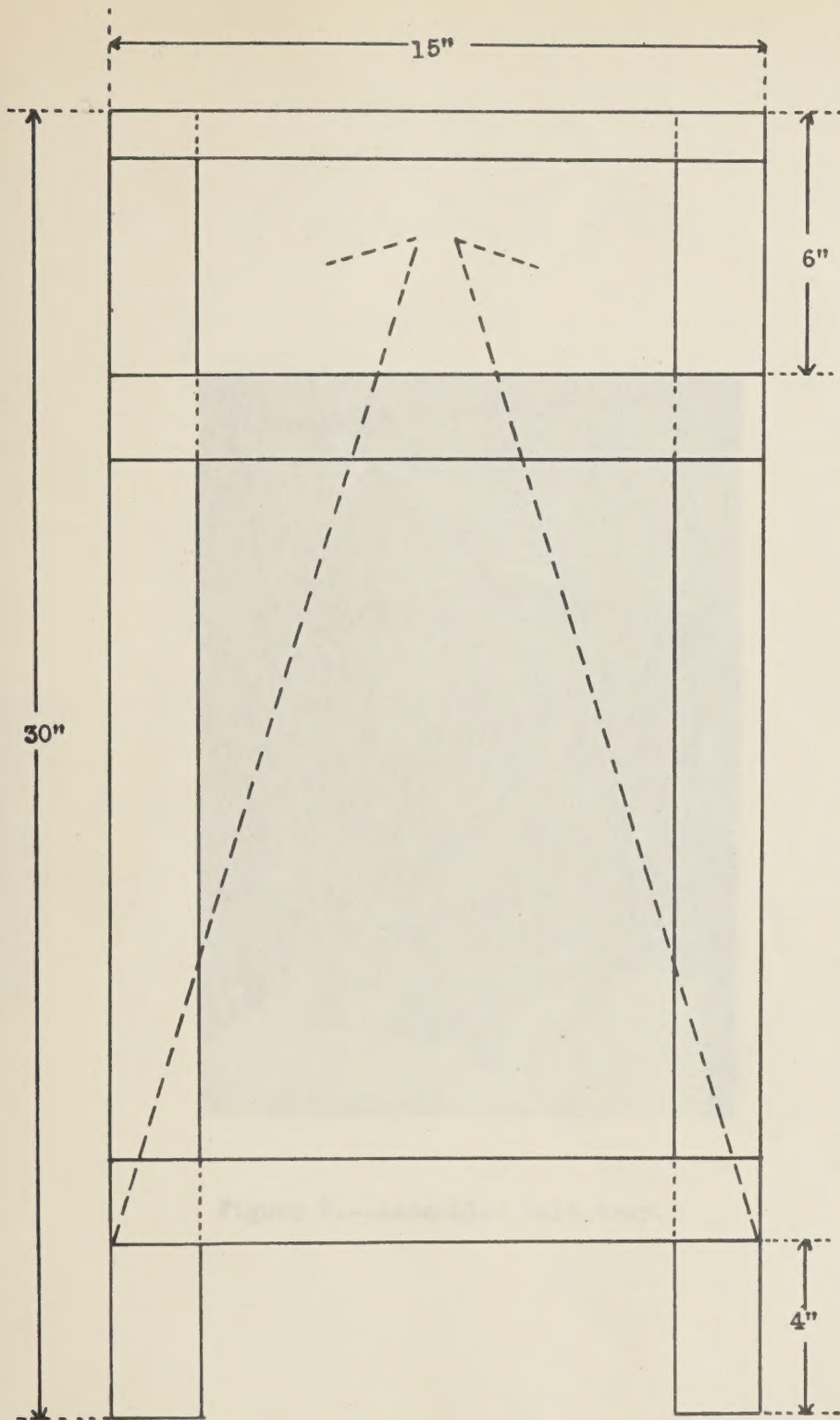


Figure 1.--Diagram of bait trap, side elevation.

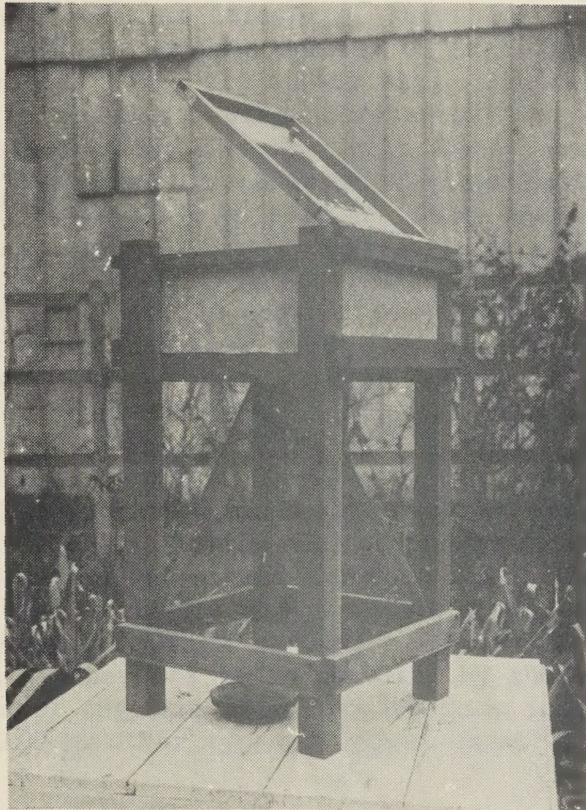


Figure 2.--Assembled bait trap.

